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Uses of microorganisms in indigenous foods and their impact on human health

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One of the oldest forms of food preservation methods in the world is fermentation. Many countries use microorganisms to ferment indigenous foods for many reasons including increasing the shelf-life and enhancing the taste and texture thus enriching the human diet, avoiding losing raw materials, reducing cooking time, improving protein quality and carbohydrate digestibility as well as eliminating toxic and anti-nutritional factors such as cyanogenic glycosides. In the Asian continent, taking Indonesia as an example, fruit and vegetables, soybean, rice and cassava, pork, buffalo and mare milk are all being fermented using lactic, mould or alcoholic fermentation. Moreover, the African region is considered having the richest varieties of lactic acid fermented foods including cereals, legumes, tuber roots, milk, fish and meat. Sudan, one of these countries has around 60 fermented foods items. Long time ago and until now, special concentration is being put on the benefits of lactic acid bacteria (LAB) to human health; one of which is probiotics. The latter has important roles to play including lowering blood cholesterol levels, preventing and treating diarrhea and altering the immune system. It has been shown that LAB is associated with vitamins' enrichment and has antioxidant and anti-inflammatory properties. The last properties are being associated with the protection against various diseases including hypertension, altered mood, depression and other chronic conditions. Several factors might contribute to the safety of fermented foods thus affecting the human health and need not be neglected. In this presentation, selected types of fermentation, fermented food products in selected countries and the health implication of the intake of fermented foods will be presented.

Biography

Ahlam Badreldin El Shikieri has completed her PhD from Queen Margaret University and MBA from Leicester University, UK. She is a registered Consultant Nutritionist, a Certified Public Health Nutritionist and an Associate Professor, currently working in Saudi Arabia as the Head of the Clinical Nutrition Department at Taibah University. She has served as an invited speaker at several workshops and conferences in Sudan, Saudi Arabia, Spain, Germany and Taiwan. She has supervised several research projects for students both at Master and PhD levels and acted as an External Examiner for postgraduate thesis. She undertook several researches focusing on assessing the nutritional status of cancer patients, children, malnourished hospitalized patients and many others related to public health nutrition. She is a Member of the Academy of Nutrition and Dietetics, British Nutrition Society, World Public Health Nutrition Association and others. She is a Reviewer for various journals including the *Journal of Nutrition Education and Behavior* and has acted as an author for more than 16 published research papers and newsletter articles.

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